2008 City of Grapevine Annual Drinking Water Quality Report

Consumer Confidence Report

City of Grapevine
Water Treatment
P.O. Box 95104
Grapevine, Texas 76099

Public Participation Opportunities

If you have questions about the quality of your drinking water or to schedule a meeting please call 817.410.3330.

Si tiene preguntas sobre la Calidad del Agua que Bebe, por favor llamar al numero 817.410.3330.

Why are you receiving this report?

This report provides you information on the quality of your drinking water. This report includes information on water source(s), levels of detected contaminants and compliance with drinking water rules. The Environmental Protection Agency (EPA) requires that all water suppliers mail this report every year.

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

Providing safe and reliable drinking water is our highest priority. We are proud to produce and deliver water that meets or exceeds state and federal standards. This report is a summary of the quality of the water we provide our customers. The analysis was made by using data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the following pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Special Notice for The Elderly, Infants, Cancer Patients, People With HIV/AIDS or Other Immune Problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno- compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The (EPA)/ Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

En Español

Este informe incluye la información importante sobre el agua para potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (817) 410-3330 par hablar con una persona bilingüe en español.

Awards

The City of Grapevine received the EPA Award for Excellence in 1992, 1995, and 1998 for the best maintained and operated water system for Region VI for water systems of similar size. Region VI consists of Texas, New Mexico, Arkansas, Louisiana and Oklahoma. In 1991, 1998, 2001 and 2004 the City of Grapevine's water was awarded the best tasting water award in North Central Texas, by the North Texas Laboratory Association. The City of Grapevine was awarded the best tasting water in Texas in March 2002. In 1994, the Trinity River Authority water was awarded the best tasting water in North Central Texas by the North Texas Laboratory Association.

All Drinking Water May Contain Contaminants

When drinking water meets federal standards, there may not be any health based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling EPA's Safe Drinking Water Hotline (1-800-426-4791).

Where do we get our drinking water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants and organic chemical contaminants.

Grapevine uses surface water from Lake Grapevine and purchased water from the Trinity River Authority (TRA). TRA water is pumped from Cedar Creek Reservoir and Richland-Chambers Reservoir into Lake Arlington.

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality and will be provided to us this year. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment will allow us to focus on our source water protection strategies. For more information on source water assessments and protection efforts at our system, please contact us or go to the following link, http://www.epa.gov/safewater/protect.html

Lake Water Treatment

At the Grapevine and TRA water treatment plants, the lake water goes through several similar treatment processes where chemicals such as chlorine, ozone, alum, fluoride, caustic, ammonia, potassium permanganate and polymer are added to purify the water. After the water is purified, it is pumped into your homes through more than 280 miles of distribution pipelines.

Definitions (and explanation of terms used in the enclosed tables)

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level (MRDL) The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Action Level - The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Turbidity - A measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Abbreviations

NTU - Nephelometric Turbidity Units
ppm - parts per million, or milligrams per liter (mg/L)
ppb - parts per billion, or micrograms per liter (µg/L)
pCi/L - picocuries per liter (a measure of radioactivity)
MFL - million fibers per liter (a measure of asbestos)
ppt - parts per trillion, or nanograms per liter
ppq - parts per quadrillion, or picograms per liter
ND - Not Detected
NA - Not Applicable

ABOUT THE FOLLOWING PAGES

The pages that follow list all of the federally regulated or monitored contaminants, that have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants. Both Grapevine and TRA results are included.

Regulated at the Customer's Tap

Year (Range)	Contaminant	The 90th Percentile	Number of sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2007	Lead	2.100	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
2007	Copper	0.1880	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

Organic Contaminants

Year (Range)	Contaminant	Grapevine Highest Level	TRA Highest Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2008	Atrazine	0.52	0.41	0.41	0.52	3	3	ppb	Runoff from herbicide used on row crops.
2008	Simazine	0.22	ND	ND	0.22	4	4	ppb	Herbicide runoff.

Inorganic Contaminants

Year (Range)	Contaminant	Grapevine Highest Level	TRA Highest Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
GPV / TRA 2002 / 2008	Barium	0.049	0.0514	0.049	0.0514	2	2	ppm	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits.
GPV / TRA 2002 / 2008	Chromium	ND	0.00107	ND	0.00107	0.1	0.1	ppm	Discharge from steel and pulp mills; Erosion of natural deposits
2008	Fluoride	0.72	0.59	0.59	0.72	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2008	Nitrate	0.62	0.12	0.12	0.62	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2002	Selenium	2.8	-	2.8	2.8	50	50	ppb	Discharge from mines, petroleum, metal refineries; Erosion of natural deposits.
GPV / TRA 2005 / 2008	Gross Beta Emitters	3.8	4.6	3.8	4.6	50	0	(pCi/L)	Decay of natural and manmade deposits.

Turbidity

Year (Range)	Contaminant	Grapevine Highest Single Measurement	Grapevine Lowest Monthly % of Samples Meeting Limits	TRA Highest Single Measurement	TRA Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2008	Turbidity	0.19	100%	0.28	100%	0.30	NTU	Soil runoff.

Turbidity (NTU) has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Unregulated Contaminants
Grapevine Water (1) TRA Water (2)

Year (Range)	Contaminant	Average Level (1)	Minimum Level (1)	Maximum Level (1)	Average Level (2)	Minimum Level (2)	Maximum Level (2)	Units of Measure	Source of Contaminant
2008	Chloroform	13.0	13.0	13.0	15.9	15.0	16.8	ppb	Byproducts of drinking water disinfection
2008	Bromoform	1.2	1.2	1.2	1.2	0.8	1.5	ppb	
2008	Bromodichloromethane	16.0	16.0	16.0	15.2	13.0	17.3	ppb	
2008	Dibromochloromethane	9.6	9.6	9.6	8.8	6.6	10.9	ppb	

Disinfection By-Products

Year (Range)	Contaminant	Average of All Sampling Points (1)	Minimum Level (1)	Maximum Level (1)	Average Level (2)	Minimum Level (2)	Maximum Level (2)	MCL	MCLG	Unit of Measurement	Source of Contaminant
2008	Total Trihalomethanes	45.4	37.6	49.8	46.5	46.5	46.5	80	0	ppb	By-product of drinking water disinfection
2008	Total Haloacetic Acids	21.5	16.7	25.7	24.5	24.5	24.5	60	0	ppb	

Unregulated Initial Distribution System Evaluation for Disinfection By-Products

The evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

Year (Range)	Contaminant	Average of All Sampling Points	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Trihalomethanes	46.3	24.5	70.6	NA	ppb	By-product of drinking water disinfection
2007	Total Haloacetic Acids	18.3	0	31.9	NA	ppb	

Disinfectant Residuals

Year (Range)	Disinfectant	Annual Average (high)	Minimum Level	Maximum Level	MRDL	MCLG	Units of Measure	Source
2008	Chloramines	2.75	0.5	4.0	4	<4.0	ppm	Disinfectant used to control microbes.

Total Organic Carbon (TOC)
Grapevine Water (1) TRA Water (2)

Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include Trihalomethanes (THM's) and Haloacetic acids (HAA) which are reported elsewhere in this report.

*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Year (Range)	Contaminant	High (1)	Low (1)	Average Source Water (1)	High (2)	Low (2)	Average Source Water (2)	Units of Measure	Source
2008	Source Water	5.8	4.3	5.0	6.1	4.8	5.5	ppm	Naturally present in the environment
2008	Drinking Water	3.0	2.5	2.8	3.8	3.0	3.4	ppm	Naturally present in the environment
2008	Removal Ratio	1.93	1.19	1.54	1.28	1.00	1.11	% Removal*	NA

Cryptosporidium Monitoring Information

Cryptosporidium is a microbial pathogen that may be found in water contaminated by feces. Although filtration removes Cryptosporidium, it cannot guarantee 100 percent removal nor can the testing methods determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water.

Cryptosporidium Monitoring Information
Lake Grapevine Water (1) Lake Arlington Water (TRA) (2)

Year (Range)	Contaminant	Positive Samples	Unit of Measure
8/2006 to 8/2008	Cryptosporidium	ND (1)	Organisms per liter
3/2004 to 2/2006	Cryptosporidium	0.10 (2)*	Organisms per liter

*Drinking water obtained from Lake Arlington. Flow from Cedar Creek and Richland Chambers reservoirs is pumped to Lake Arlington to maintain lake levels during dry periods. Samples were collected from all three reservoirs monthly from March 2004 through February 2006 and analyzed for the presence of Cryptosporidium in accordance with the Long Term Stage 2 Enhanced Surface Water Treatment Rule. Of the 72 samples collected, only two samples were found to contain Cryptosporidium at a measurable level of 0.1 organisms per liter of water sampled (one organism in each of the two samples).

Coliforms

Total Coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Contaminant	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2008	Total Coliform Bacteria	1.9	*	Presence	Naturally present in the environment

* Presence of coliform bacteria in 5% or more of the monthly samples.

Fecal Coliform bacteria and in particular, E.coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals that passes into the environment through feces. The presence of fecal coliform bacteria (E.coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The below tables indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing last year.

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA

Secondary Constituents

Many constituents (such as calcium, sodium or iron) which are often found in drinking water can cause taste, color and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not EPA. These constituents are not causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance, taste and odor of your water.

Secondary and Other Constituents Not Regulated
(no associated adverse health effects)
Grapevine Water (1) TRA Water (2)

Year (Range)	Constituent	Average Level (1)	Minimum Level (1)	Maximum Level (1)	Average Level (2)	Minimum Level (2)	Maximum Level (2)	Limit	Units of Measure	Source of Constituent
GPV / TRA 2002 / 2008	Aluminum	0.055	0.055	0.055	0.0439	0.0439	0.0439	50	ppm	Abundant naturally occurring element.
2008	Biocarbonate	110	110	110	95	95	95	NA	ppm	Corrosion of carbonate rocks such as limestone.
2002	Calcium	46.6	46.6	46.6	36.7	36.7	36.7	NA	ppm	Abundant naturally occurring element.
2008	Chloride	22.6	22.6	22.6	21.5	21.5	21.5	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2002	Iron	10	10	10	22	22	22	300	ppb	Erosion of natural deposits; iron or steel water delivery equipment of facilities.
GPV / TRA 2002 / 2008	Copper	0.016	0.016	0.016	0.00993	0.00993	0.00993	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
GPV / TRA 2002 / 2008	Magnesium	6.61	6.61	6.61	4.32	4.32	4.32	NA	ppm	Abundant naturally occurring element
GPV / TRA 2002 / 2008	Manganese	ND	ND	ND	0.00366	0.00366	0.00366	0.05	ppm	Naturally occurring element.
2008	pH	8.09	8.09	8.09	8.20	8.20	8.20	7	units	Measure of corrosivity of water.
GPV / TRA 2002 / 2008	Sodium	37.2	37.2	37.2	30.2	30.2	30.2	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2008	Sulfate	59.6	59.6	59.6	49.5	49.5	49.5	NA	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2008	Total Alkalinity as CaCO3	110	110	110	95	95	95	NA	ppm	Naturally occurring soluble mineral salts.
2008	Total Dissolved Solids	260	260	260	217	217	217	1000	ppm	Total dissolved mineral constituents in water.
2008	Total Hardness as CaCO3	136	136	136	110	110	110	NA	ppm	Naturally occurring calcium.

SAVE WATER.
Nothing can replace it.

INDOOR
Indoor Water Conservation Tips

Tips For Saving Water In The Kitchen:
Load up that dishwasher. Waiting until you have a full load to run saves water and energy.

Don't rinse your dishes before putting them in the dishwasher. Scraping instead of rinsing dishes before you load them can save you 10 or more gallons of water per load.

Don't let the faucet run while you clean vegetables. Rinse them in a filled sink or pan.

Tips For Saving Water In The Laundry Room:
Load up that machine. Wait until you have a full load to save water and energy. If you must do a smaller load, adjust the water level accordingly.

Make your next washer an Energy Star® Model.
Replace a conventional washer with a high-efficiency one (that uses 27 gallons per load or less) and you'll lower your energy bills and use about 38 percent less water. That's 5,000 to 7,000 gallons per year for the average household.

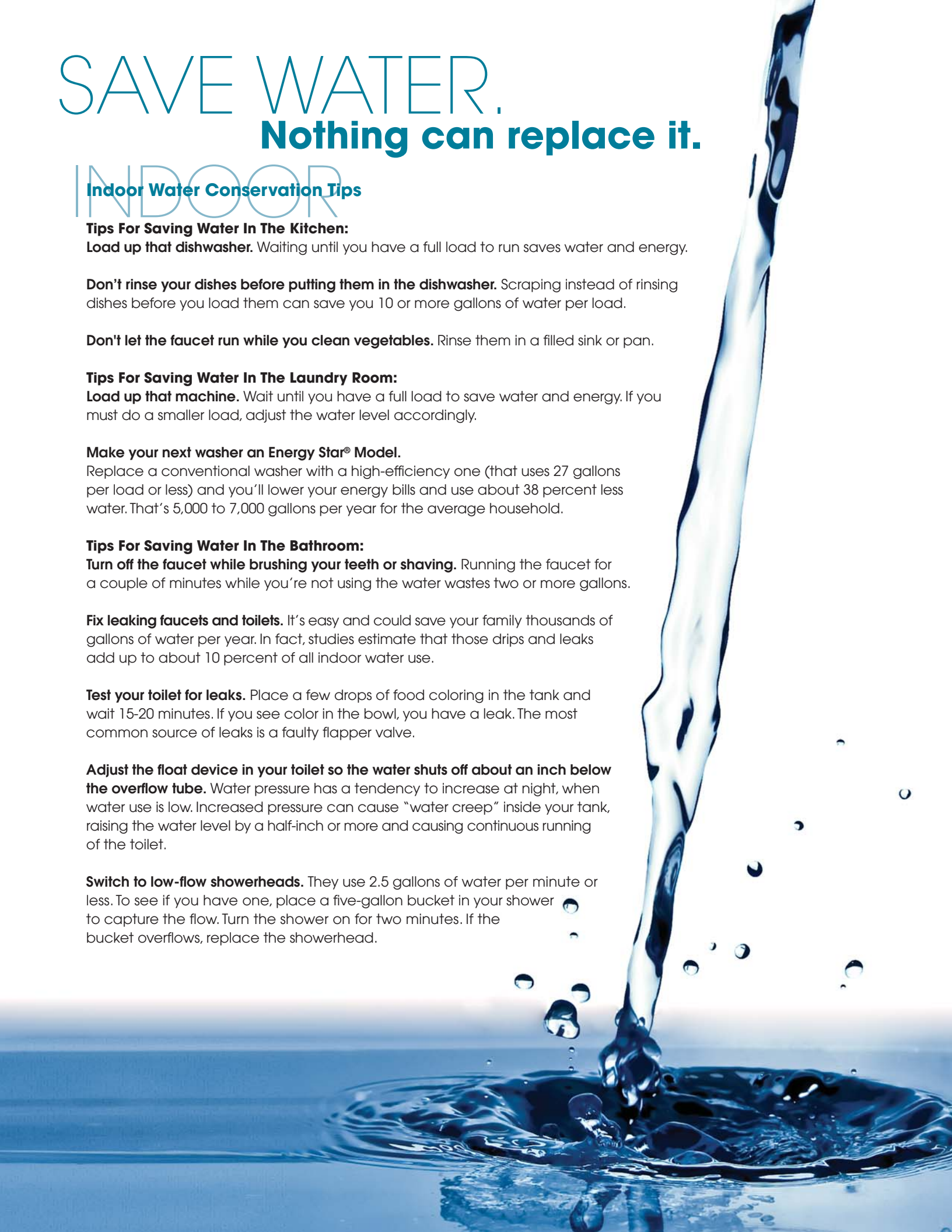
Tips For Saving Water In The Bathroom:
Turn off the faucet while brushing your teeth or shaving. Running the faucet for a couple of minutes while you're not using the water wastes two or more gallons.

Fix leaking faucets and toilets. It's easy and could save your family thousands of gallons of water per year. In fact, studies estimate that those drips and leaks add up to about 10 percent of all indoor water use.

Test your toilet for leaks. Place a few drops of food coloring in the tank and wait 15-20 minutes. If you see color in the bowl, you have a leak. The most common source of leaks is a faulty flapper valve.

Adjust the float device in your toilet so the water shuts off about an inch below the overflow tube. Water pressure has a tendency to increase at night, when water use is low. Increased pressure can cause "water creep" inside your tank, raising the water level by a half-inch or more and causing continuous running of the toilet.

Switch to low-flow showerheads. They use 2.5 gallons of water per minute or less. To see if you have one, place a five-gallon bucket in your shower to capture the flow. Turn the shower on for two minutes. If the bucket overflows, replace the showerhead.



City of Grapevine
Water Treatment
P.O. Box 95104
Grapevine, Texas 76099

Postal Patron

OUTDOOR

Helpful Outdoor Watering Tips

Water your lawn before 10 a.m. or after 6 p.m. Why? The City of Grapevine has an ordinance prohibiting watering from 10 a.m. to 6 p.m. in an effort to minimize waste. Up to 30 percent of the water sprayed on lawns during the heat of the day can be lost to evaporation.

Avoid over-watering. Applying one inch of water on your lawn about once a week during the summer is plenty. It encourages deeper root systems and makes for healthier grass. Reduce that frequency to one inch every 15 to 20 days during the winter.

Get sensitive. Rain and freeze sensors will trigger automatic sprinkler systems to shut off during downpours or when temperatures dip near freezing. And they could reduce your outdoor water use by about five to ten percent.

Check your irrigation systems regularly. Fix leaks or damaged sprinkler heads and make sure they're aimed at the landscape, not the streets or sidewalks. It's also a good idea to give your sprinklers a rest on windy days to avoid overspray and water losses due to evaporation.

Grow native. Native and adapted plants thrive on less water, can withstand the Texas heat and are easier to maintain. They are also wildfire friendly. You can find more information at www.txsmartscape.com.

Inch toward conservation.

Water an inch every 5-7 days.

SAVE WATER. Nothing can replace it.